

castles, consisting of a round and square keep, which was succeeded by a flight of steps, the whole being of the rudest structure. Now was it until two hundred years after their first arrival, that the Saxons, or Anglo-Saxons, had made any sensible advances to the art of architecture. During that period, masonry was scarcely known in this island, and even the walls of cathedrals were constructed of wood.

Towards the end of the seventh century, however, masonry was restored, principally by two priests who had visited Rome and acquired a taste for the arts. These were Wilfrid, Bishop of York, and afterwards of Hexham, and Benedict Biscop. Wilfrid, who was one of the most ingenious prelates of that age, erected several ecclesiastical edifices at York, Rippon, and Hexham, which exhibited proofs of his having an intimate knowledge of architecture. The cathedral of Hexham was built by masons and other artificers brought from Rome by the munificence of its founder. Benedict Biscop was the contemporary and companion of Wilfrid in some of his journeys, and had the same taste for the arts. Having obtained a grant of an estate from Egfrid, king of Northumberland, near the mouth of the river Werr, he founded a monastery in the year 674. Benedict brought from France a number of masons, to build the church of his monastery of stone, after the Roman manner, of which he was a great admirer. When the work was far advanced, he sent agents abroad to procure some glass-makers, artificers then unknown in England, to glaze the windows of his monastery.

Although the art of building edifices of stone was introduced into Britain by these zealous prelates, yet it did not make that progress which might have been expected, and even in the eighth and ninth centuries stone buildings were still so rare, as to be considered objects of surprise and admiration. As a proof of this, we may state, that when Alfred the Great, towards the close of the ninth century, wished to rebuild his ruined cities, churches, and monasteries, and thus adorn his kingdom with more magnificent structures, he was obliged to seek artificers in foreign countries.

Architecture was as little understood by the Scots and Picts as among the ancient Britons, though about the beginning of the eighth century they began to acquire some knowledge of masonry, as appears by some of the circular buildings still extant in Scotland, which are formed of stone without cement. These buildings or towers were of two classes; the first for residence and defence, the second for religious services; the latter were slender and lofty, but circular like the others, and similar to the tower of Ardmole, which was built about the tenth century.

The science of architecture, which slumbered for four or five centuries after Wilfrid and Benedict, started into life in the twelfth century, which has been called the age of architecture, on account of the decided improvement which took place in the erection of churches, castles, and private houses. It was the fervency of religious zeal which produced this improvement, and every means were taken to encourage it, so much so, that when Joffred, Abbot of Croyland, resolved to rebuild the church of his monastery in 1106, the Archbishops of York and Canterbury granted him a bull, which dispensed with the third part of all penances for sin, to those who contributed any thing towards the building of that church. During its erection, the abbot entertained five thousand persons (mostly contributors) at dinner; by such means the clergy inspired kings, nobles, and people of all ranks with so ardent a zeal for the raising of ecclesiastical edifices, that in a short time they were all rebuilt.

The ecclesiastical architecture of the Anglo-Normans varied little in the style from the Anglo-Saxons. The churches were generally plain, low, strong, and dark, and the arches over both doors and windows semicircular; in those succeeded that bold, magnificent style of building, commonly called the later or modern Gothic, which, with the Gothic, include the buildings not belonging to the regular orders.

For a long time, however, architecture lavished all its favours on religious edifices and castles, so late as the close of the twelfth century, the houses even in London were built of wood and covered with straw or

reeds. The palaces or castles built by the Normans were, however, much superior to those of the Anglo-Saxons, who squandered away their ample revenues in low and mean houses; but the French and Norman barons lived at less expense, but in magnificent palaces. The fact is that William I., feeling how the want of fortified palaces in England facilitated his conquest and might cause his expulsion, determined on erecting magnificent and strong castles in all the towns within the royal demesnes. This plan was followed on a more enlarged scale by William II. and Henry I.; but the rage of building never prevailed so much in any period of early English history as in the turbulent reign of Stephen, from the years 1135 to 1154. "In this reign," says the author of the *Razon Chronicle*, "every one who was able built a castle, so that the poor people were worn out with the toil of these buildings, and the whole kingdom was covered with castles." It is further stated, that during this king's reign of nineteen years, 1,115 castles were raised, in addition to those previously erected. The castles, monasteries, and churches were generally covered with lead, and the windows glazed. Many of the architects, principally ecclesiastics, rose to considerable eminence. William, of Sens, architect to Archbishop Lanfranc, in building his cathedral, is said, by Gervase, of Canterbury, to have been a most exquisite artist both in stone and wood. He made out only a model of the whole cathedral, but of every particular piece of sculpture and carving, for the direction of the workmen; and he invented many curious machines for loading and on-loading ships, and conveying all the stones which were brought from Normandy.

In the fifteenth and sixteenth centuries, when learning of all kinds began to revive, the chaste architecture of the Greeks and Romans seemed, as it were, to be recalled into life. The first improvement it commenced in Italy, and owed their existence to the many ruins of the ancient Roman structures that were to be found in that country, whence so improved method of building was gradually brought into the other countries of Europe; and though the Italians for a long time retained the superiority as architects over the other European nations, yet as men of genius travelled from all quarters into Italy, where they had an opportunity of seeing the originals from whence the Italians copied, architects arose in other nations equal, if not superior, to those of Italy.

M.

## SCHOOL BUILDING.

We adverted a week or two ago to the active campaign about to be entered on by the Wesleyans in the great education scheme; and every body is already conversant with what is on foot under the auspices of "the establishment,"—how an enormous subscription, fast attaining to 200,000*l.*, is being raised by individual subscriptions of thousands, of hundreds, and of fifty*l.* The Independents are now bestirring themselves, and at a meeting on Wednesday week, convened at the Congregational Library, in Finsbury-place, Charles Hindley, Esq., M.P., to the chair, and supported by gentleness of that religious denomination from all parts of the kingdom, it was resolved to raise 100,000*l.*, as their share towards the great work. 12,845*l.* was subscribed on the spot.

Again, we urge upon all, that they should, in providing education for a future race, which education, if good for any thing, exhibits itself best in the apt and the appropriate, whether as regards time, person, place, work, or thing; we urge that the present should exhibit that they were not altogether unlearned themselves; that they knew what was apt and appropriate, or how to procure the selection of it; that the material edifice in which all this moulding of the mind is to be carried on; that proper persons be confided in to design and erect such buildings; that fitting places be selected, not holes and corners, and refuse spots, and because unfitted for any thing else, therefore selected for schools; that the work should be not only cleanly, but expressive, and equal to its elevation of purpose. And next to the temple for God's worship should be our care and consideration for these temples in which

are enshrined for the white rinds of angelic innocence. Let there be an debarment we say, on passive and soul-prostrating idleness, wrought out under the influence of the tasteless abominations usually presented to our eyes for children's schools. Heaven knows, for man does not, the mischief perpetrated by the best false impressions. The building is an important book.

## THE NORMAN TOWER AT BURY ST. EDMUNDS.

We are glad to be enabled to reprint the following letter, giving assistance to those anxious for the preservation of this venerable and interesting edifice.

Bury St. Edmunds, Dec. 6, 1843.

Sir.—In the last number of the *Ecclesiologist*, a publication of the Cambridge Camden Society, appears this paragraph:

"We took the opportunity, some time back of drawing attention to the Old Norman Tower at Bury St. Edmunds, and gave what encouragement we could to its restoration. Unfortunately, the attempt seems to have come too late, since we learn that a part of it has already fallen, and the whole is now in such a state of low security, that it seems little likely to stand much longer. It is not six months since we had to record the demolition of the Sear's Barn at Ely; and we have now to announce the loss of another monument, as unique as the former, and perhaps still more interesting and imposing, when probably on very considerable sum, expended in proper time, would have been sufficient to preserve either of them for nearly as many centuries longer as they have already reckoned."

As this erroneous paragraph is calculated to impede the exertions of the Committee for the Restoration of the Tower, I will thank you to give as early insertion to the following facts.

It is true that a small portion of the abutting immediately under the apse-stone at one of the angles recently fell down; and that there was reason to fear that several more courses of masonry would shortly follow; but it is not correct, as the Members of the Camden Society will be glad to learn, to state that "the whole (fabric) is now in such a state of insecurity, that it seems little likely to stand much longer."

By the prompt attention and scientific skill of Mr. Cottingham, the Committee's architect, a stop has been put to further disructions; and such is the confidence of the architect to the security of the building, that, with his sanction, a free passage has been again permitted along the road at its base.

The restoration, it is expected, will shortly be proceeded with, and the Committee entertain a confident hope that they will be enabled to preserve "for many centuries," this unique, interesting, and imposing monument, "with all its beautiful and valuable details. But for this purpose they must appeal to the liberality of the public, especially to those (thanks to the Camden Society, not a few) who respect the skill and taste of our ancestors, and desire to imitate their pious liberality."

I am, Sir, your obedient servant.

SAMUEL TYNNE,

Hon. Sec. to the Committee for the Restoration.

IMPROVEMENTS IN THE MANUFACTURE OF IRON.—An extraordinary machine has lately been introduced at the Dundee Iron Works, for expressing the impurities from the lumps of iron as they are taken from the puddling-furnace, superseding the ordinary process of the four-hammer. It cannot be better described than as a Brodie-glan roller-mill; the external cylindrical case, which may be about four feet in diameter, by twenty inches high, being grooved or fluted internally, in a direction parallel to the axis. The interior cylinder, which is grooved correspondingly, and driven by powerful machinery, is about two inches smaller in diameter, and placed so far eccentric in the case, as to admit a puddled ball of the usual size, which after undergoing rather an enormous treatment, consisting of being hugging, grinding, and detouring, is discharged in the form of a cylinder from four to five inches in diameter, ready for the rolling mill. This is an American machine, patented by Mr. Laurence Hall, and erected by Mr. McOm, of Glasgow, and is, we are given to understand, the only one in use in the kingdom.—*Mining Journal*.